

## Abstract

A method for immunizing fish against pathogenic infection is disclosed. More particularly, this invention provides a method of immunizing fish against bacterial and viral infection which comprises immersing the fish in a solution comprised of an effective amount of dead or attenuated, whole-celled recombinant bacteria, the recombinant bacteria having a eukaryotic expression vector (plasmid) incorporated therein having DNA of interest encoding at least one protein antigen for each of the pathogens, the method characterized in that the protein antigen is produced by the fish.